

Report of the 2nd



Americas Meeting



**Brasilia, Brazil,
27 to 29 March 2001**



**Pan American
Health Organization**

Regional Office of the World Health Organization



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Pan American Sanitary Bureau, Regional Office of the
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The excellent organization and hosting of the meeting by the PAHO/WHO Representation in Brazil was crucial to the success of this meeting.

Executive Summary

The 2nd *Stop TB Americas* Meeting was held from 27–29 March 2001 in Brasilia, Brazil in which the progress in implementation of the recommendations from the first meeting held two years ago was reviewed. National Program Managers, authorities from the Ministries of Health and representatives from other health sector institutions analyzed the challenges for DOTS expansion in their countries (Bolivia, Brazil, Ecuador, Haiti, Honduras, Mexico, Peru and the Dominican Republic). National five-year TB control and prevention plans of actions were also analyzed and suggestions provided for their improvement. In addition, strategic partners in TB control in the Region, including development agencies and NGOs, presented their current projects, perspective for future collaboration and took the opportunity to discuss possibilities for improved coordination efforts.

Impressive gains in TB control in the Region include the widespread adoption of the DOTS strategy, increased political will to guarantee sustainability of TB control activities, greater coordination and involvement of stakeholders, and increased financial resources devoted to TB control and prevention. The majority of countries in the Americas have conducted anti-TB drug resistance studies. These studies have found that anti-TB drug resistance, including MDR-TB, is not a significant public health threat in the Americas overall, although it is a problem in a few countries due to poor performance of previous control programs. The few countries that have not conducted studies have plans to do so within the next year.

Areas of concern include managerial issues such as constant high turnover of trained staff, including staff at the central level, and the need for improvement in training, supervision and information, education and communication (IEC) activities. Furthermore, the need for increased operations research to address challenges to TB control, including HIV/TB co-infection, in the Region was highlighted.

Finally, progress in the control and prevention of TB in the Region has been made but challenges remain. Through increased partnerships, however, at the local, regional and global levels it was concluded that these problems could be solved and WHO global targets for detection and cure of patients with TB achieved by 2005.

Report of the 2nd *Stop TB Americas* Meeting

Brasilia, Brazil, 27–29 March 2001

Background

In July 1999, in Brasilia, the 1st *Stop TB Americas* Meeting brought together the TB program directors from eight countries (Bolivia, Brazil, Ecuador, Haiti, Honduras, Mexico, Peru, and the Dominican Republic) prioritized in the Region of the Americas based on their high burden of TB and the limitations of their implementation/expansion of DOTS. Also participating from each country were authorities from the Ministry of Health with whom the local plans of action were discussed and from whom political commitments were obtained for the implementation/expansion of DOTS.

This second meeting involved the same countries but with expanded participation. Each delegation included representatives from other institutions in the health sector (Social Security and pneumological societies). Agencies, institutions, and NGOs that support control programs at the global, regional, and local levels were also invited.

Objectives

1. Review the progress in implementation of the recommendations from the 1st *Stop TB Americas* Meeting in 1999
2. Analyze the challenges for the expansion of DOTS in the eight countries prioritized for the control of TB;
3. Analyze the five-year plans of action for each country to achieve the complete expansion of DOTS and the global targets of WHO; and,
4. Achieve strategic partnerships in the Region to support the plans for TB control.

Inauguration

The 2nd *Stop TB Americas* Meeting was inaugurated by the Minister of Health, José Serra; Dr. Angel Valencia, Acting Representative of PAHO/WHO in Brazil; Dr. Heloísa Machado, in charge of the Department of Basic Health Care; Dr. Marcos Espinal from *Stop TB/WHO*; and Dr. Rodolfo Rodríguez, PAHO Regional TB Adviser. Also participating in the event were international development agencies (USAID, CIDA), other governmental institutions (CDC, American Red Cross), and nongovernmental organizations (IUATLD, CLA, DAHW, and the Damian Foundation), which are part of the *Stop TB* alliance to extend the DOTS strategy in the Region.

1. TB Situation in the Region of the Americas

The PAHO Regional TB Adviser, Dr. Rodolfo Rodríguez, pointed out that TB continues to constitute a significant health problem at the global and regional levels. According to WHO estimates in 1999, there were nearly 8.4 million new cases and 80% of them were in 23 countries with the greatest disease burden in the world. There are also an estimated 1.9 million deaths per year, 98% of them in the developing countries. Furthermore, it is estimated that 365,000 deaths are due to the combination of TB and HIV. In addition, multiple resistance to anti-TB drugs (MDR-TB) was present in 63 of the 72 countries that conducted surveys from 1994 to 1999.

The Region of the Americas generated 7% of reported TB cases at the global level. In 1999, in the Region, 238,082 cases of all forms of TB were reported, which represented a reduction of 5.4% from 1998. However, reported smear positive cases (AFB(+)) increased 19%, which could be interpreted as an improvement in detection and diagnosis of cases.

Eight countries with the greatest burden of TB (Brazil, Bolivia, Ecuador, Haiti, Honduras, Mexico, Peru and the Dominican Republic) reported 75% of all the cases in the Region in 1999 (Brazil and Peru alone accounted for 51%).

TB situation in prioritized countries in the Region of the Americas, 1998–1999

Country	Total no. of cases		Difference (%)	No. of AFB(+) cases		Difference (%)
	1998	1999		1998	1999	
Bolivia	10,132	9,272	-8.4	6,750	6,506	-3.6
Brazil	84,194	78,628	-6.6	38,809	41,434	+6.7
Ecuador	9,184	7,027	-23.4	6,455	5,149	--20.2
Haiti	9,770	9,125	-6.6	6,442	6,750	+4.7
Honduras	4,916	4,264	-13.2	2,311	2,367	+2.4
Mexico	21,514	19,802	-7.9	12,622	13,452	+6.5
Peru	43,723	41,730	-4.5	27,707	24,511	-11.5
Dom. Rep.	4,263	5,320	+24.7	2,164	2,936	+35.6
Total	187,696	175,168	- 6.7%	103,260	103,115	- 0.1

Source: Informe anual de los PNT, 2000; Boletín "Tuberculosis" Vol 3, No.3, 2000.

When the total number of cases reported in 1998 is compared with the figure for 1999, a reduction of 6.7% is observed, although in the case of Ecuador the reduction reaches 23.4%. A decrease of this magnitude in countries where the programs are inefficient should suggest that the decline is determined by a decrease in case finding, or by deficiencies in the registries and case reporting, or by problems with the laboratory network for case diagnosis. It was recommended to the national tuberculosis control programs (NTP) of Bolivia, Brazil, Ecuador, Haiti, Honduras, and Mexico that they look for and find an explanation for the aforementioned situation.

2. Implementation of the Recommendations of the 1st *Stop TB Americas* Meeting

At this event, an exhaustive review of compliance with the recommendations made in the 1st *Stop TB Americas* meeting (June 1999) was carried out. Below, the aforementioned recommendations and the progress made are presented, along with the principal limitations that still persist in the control of TB and the application of the DOTS strategy in the prioritized countries.

2.1 "The DOTS strategy has been accepted by the entire Region, making control of TB possible."

Of the 25 countries with more than one million inhabitants, 24 countries (96%) are applying the DOTS strategy with different levels of coverage.

Levels of coverage of the DOTS strategy				
>90%	>50% <90%	>10% <50%	<10%	No DOTS
Chile	Bolivia	Argentina	Brazil	Guyana
Cuba	Belize	Colombia	Costa Rica	Suriname
Nicaragua	Guatemala	El Salvador	Ecuador	Countries of the English-speaking Caribbean
Peru		Honduras	Haiti	
Uruguay		Mexico	Panama	
Venezuela			Paraguay Dominican Rep.	

Source: Reunión regional de evaluación de los PNT, México, septiembre 2000. OPS.

With respect to the eight countries in boldface in the above table, the following can be stated:

- One country (Peru) has total coverage (100%).
- One country (Bolivia) has between 50% and 90% coverage.
- Two countries (Mexico and Honduras) have coverage of 40% and 50%, respectively.
- Four countries (Brazil, Haiti, the Dominican Republic, and Ecuador) have less than 10% coverage.

These eight countries with a population of 329 million inhabitants achieve DOTS coverage of 33%; with Brazil excluded, coverage reaches 50%. Of the AFB(+) cases reported in 1999, only 37% were treated following DOTS protocol. This percentage reaches 55% when Brazil is excluded.

In the two years since the previous meeting, the best results were produced in Peru, which increased its DOTS coverage to include MDR-TB cases, and in Mexico, whose DOTS coverage went from 30% to 50%. There was progress also in Honduras and Haiti. In the case of Brazil, the country with the greatest patient load in the Region, there was little progress in the expansion of DOTS, although there have been demonstration areas in several states and municipalities. In the central west DOTS demonstration area, although geographic expansion has been slow, the results obtained with regard to the efficiency of the program are higher than in the rest of the country.

2.2. "Generate national political will to guarantee the sustainability of the TB control activities."

All of the 24 countries applying the DOTS strategy prepared plans of action for the 1999 to 2000 biennium. However, in the period after the 1st *Stop TB Americas* Meeting, mobilization of national resources was not what was expected in some of the eight highly prioritized countries, as can be seen in the table below.

Mobilization of national resources in the prioritized countries, 1999–2000.

Country	Increase	Same level	Decrease
Bolivia		X	
Brazil	X		
Dominican Rep.		X	
Ecuador			X
Haiti		X	
Honduras		X	
Mexico	X		
Peru	X		

Source: National Plans of Action and annual reports

In four of the eight countries (50%), the level of resources devoted to the NTP was maintained, which does not signify an important achievement, since in the majority of them the national budget allocation does not meet all the needs of the NTP. Three countries increased resources and Ecuador experienced the greatest difficulties with the purchase of anti-tuberculosis drugs and lack of resources for control activities.

For the 1998 to 1999 biennium, indicators of the efficiency of the NTP in these eight countries are presented below:

Principal indicators for the evaluation of the prioritized programs.

Country	BK(+) case-finding smears (estim. %)	Cure (%)	Success (%)	Abandonment (%)	Access to drugs (%)
Bolivia	75%	56	42	10	75
Brazil	70%	10	40	6	100
Dom. Rep.	53	30	41	13	90
Ecuador	72	-	-	-	50
Haiti	53	61	79	8	90
Honduras	88	53	63	9	75
Mexico	73	66	73	16	100
Peru	94	92	92	3	100
TOTAL	74%	53	64	9	85

Source: Informes anuales de los PNT y estimaciones en el Global TB Control, Report 2000 . WHO.

Except for the Dominican Republic and Haiti, according to WHO estimates more than 70% of the case-finding smears were positive, which constitutes a good indicator in the search for infectious cases.

Limitations: Although progress has been made, TB control still requires greater governmental support in some of the countries represented. Treatment results in seven countries (excluding Peru) do not show great progress, which is closely related to the level of application of DOTS in these countries. Although there has been progress in some countries, such as Mexico, Honduras and Haiti, greater efforts are required to improve program efficiency.

It should be emphasized that the supply of first-line anti-TB medications was good in the year 2000. However, in some countries there were limitations on the purchase of some medications.

2.3 "Sensitize and mobilize international organizations and agencies to obtain funding for the NTP."

In the two years that have elapsed, it has been possible to obtain external funds for Mexico (USAID) and Ecuador (CIDA). In four countries, Peru (CIDA), Bolivia (DFID), Honduras (USAID), and Haiti (World Bank), external funds were available for projects initiated in 1998. For the year 2001, there are prospects of support for the Dominican Republic (USAID, World Bank, Damien Foundation), Brazil (USAID), and Haiti (USAID, CIDA).

The external funding situation is summarized for the countries of the Region in Table 2 in the Annex.

Limitations: Although that there has been an increase in the support for the NTP by donors and agencies, the governments of the countries should be urged to guarantee the

sustainability of TB control activities. The external support that is received should be complementary. It should increase the efficiency of the NTP, with the objective of expanding the DOTS strategy for the achievement of WHO global targets, but it should not replace state responsibility.

2.4 "Training, supervision, evaluation, and IEC should be priorities of the NTP in the implementation and expansion of DOTS."

In general, there has been progress in these activities in the eight countries represented, but with certain differences in the levels reached by each country. The table below shows these levels, based on evaluations of the NTP.

Training, supervision, IEC, and evaluation in countries with greater TB burdens

Country	Level		
	Optimal	Acceptable	Insufficient
Bolivia		X	
Brazil			X
Dominican Rep.		X	
Ecuador			X
Haiti			X
Honduras		X	
Mexico	X		
Peru	X		

Source: *Informes anuales de los PNT; Evaluación de los PNT, 1999 y 2000.*

Limitations: In several countries these activities have been integrated into plans that are prepared for various programs, with no specific activities having resources assigned to the NTP for the expansion of the DOTS strategy. The changes in the health sector structures resulting from reform (decentralization) have, in many cases, affected the aforementioned activities, although significant activities, such as technical standardization and centralization of drug purchasing, have been kept at the central level of the NTP.

2.5. "Education of human resources for the NTP should constitute a priority for the implementation and expansion of DOTS."

The weakness of the regional, central, and local levels in complying with the plans of action for the expansion of DOTS, along with the continuous rotation of the managerial staff, constituted one of the most debated subjects at the previous *Stop TB Americas* meeting. Nevertheless, we consider that there has been significant progress in training capacity in the majority of the countries represented at the meeting. In the Region there are four two-week-long international courses for the training of physicians, nurses, and laboratory technicians. These courses, located in subregions, are held every year in Cuba, Chile, Nicaragua, and Peru with approximately a total of 100 to 150 participants, who

basically manage the NTP activities at the different levels (central, regional, and local) in the countries of the Region.

The importance of the acquisition and integration of specialists (pneumonologists) into TB control activities has led to the creation of courses organized by the IUATLD in collaboration with the NTP and PAHO. In the last two years more than 400 specialists have been trained in courses in Bolivia (1), El Salvador (3), Honduras (3) Guatemala (2), Mexico (2), Nicaragua (1), Peru (1), and the Dominican Republic (1).

Education of human resources for TB laboratories has benefited from courses in management using WHO modules, in Cuba, El Salvador (Central America), Argentina (Southern Cone), Brazil (Rio de Janeiro), and Peru.

Limitations: In several countries, there is a constant rotation of human resources trained for management of the NTP most frequently at the regional and local levels. The periodic political changes that occur systematically affect the administrative and technical personnel responsible for program activities. Although this limitation was already discussed exhaustively at the previous meeting, it continues with no solution in almost all the countries.

2.6 "Operations research and studies of resistance to anti-TB drugs should constitute priorities of the NTP in response to the difficulties in implementing and expanding DOTS."

The prevalence of HIV/TB coinfection, studies of resistance to anti-tuberculosis drugs, and the annual risk of infection have been research topics that have been granted major attention and importance by the countries of the Region. There are other problems--for example, the prevalence of TB in high-risk populations such as the indigenous and prison populations--that should have greater attention in all the high burden countries.

The problem of HIV/TB coinfection constitutes the greatest threat to TB control in several countries of the Region. It is estimated that more than 5% of the diagnosed cases are due to dual infection, but that in some countries it is more than 10%. The situation is variable in the eight countries represented but the scope of the problem is greater in Haiti, the Dominican Republic, and Honduras and in large cities in Brazil and Mexico.

Resistance to anti-tuberculosis drugs, especially MDR-TB, constitutes a serious threat, although it is not a problem of first magnitude in the countries of the Region except for the Dominican Republic. It is more obvious in countries with relatively inefficient programs where the DOTS strategy has not been implemented at the desired level and where the supply of drugs and treatment supervision still do not reach required levels.

Limitations: The existing resources for research are limited in many countries, and in many cases the levels of comprehension and sensitivity to address the problem with the urgency that is required are not present. The gaps that occur in the regular supply of anti-tuberculosis drugs resulting from nonexistent or inadequate resource planning, as well as

from bureaucratic problems in purchasing, continue to constitute a problem to be resolved by the Ministries of Health; this is the case in Honduras, Ecuador, and Bolivia.

2.7 "Collaboration among countries and dissemination of information about the successes in the application of DOTS should be utilized to sensitize countries with problems in the expansion of DOTS and promote support for their NTP."

Although with limitations, because of insufficient resources, the successes achieved by the program in Peru have permitted PAHO/WHO/IUATLD to utilize this program as a source of training and of collaboration with other countries of the Region. In the period elapsed, the NTP of the Dominican Republic, Ecuador, Bolivia, Brazil, and Haiti have received advisory services on national control plans, as well as on the training of staff responsible for the management of the NTP. The courses in Nicaragua, Cuba, and Chile have also trained staff from almost all the countries represented.

3. Discussion by Working Groups

Challenges to the expansion of DOTS in the Region were discussed in working groups (selected countries) and then in plenary session. The conclusions and recommendations are detailed below:

3.1 Commitment of other institutions in the health sector (private medicine, social security, prisons)

This group was coordinated by Dr. Rodolfo Rodríguez, with the participation of delegates from Brazil and Mexico (Social Security, since those in charge of the NTP of the Secretariat of Health were absent).

In Mexico, the Mexican Social Security Institute (IMSS) covers 59 million insured. It has participated in the development of the national TB norms, invited by the Ministry of Health. By state law, the Ministry of Health has the mandate to develop the national standards for TB control and the IMSS has participated in that development and adheres to them in all its centers. Supervised treatment is administered in the IMSS centers closest to the patients or in other centers regardless of the fact that they are from other health institutions. By law private physicians must report cases of TB. In addition, in many cases the IMSS refers the cases to the public sector for free treatment.

In Brazil, Social Security has been part of the Unified Health System (SUS) since 1979; it has had a unified reporting system with the same database for more than 20 years. Private centers can treat patients, but monitoring with sputum smear microscopy must be done in the laboratories of the SUS. Since the 1980s in Brazil TB training materials have been published by the academic institutions, in coordination with the health sector. The pneumology group is consolidated and participates in developing the national regulations. One of the challenges lies in uniting the community with civil society. There are NGOs that are obtaining better results in the control of TB than the public sector.

The Ministry of Justice of Brazil oversees the penitentiary system. However, TB information on prisons is not available; the situation is similar for shelters for the indigenous population and mental hospitals. All these institutions have medical services that should be involved in control of TB and the application of DOT.

Recommendations

- Maintain excellent inter-institutional coordination to achieve success in the NTP under the DOTS strategy.
- Avoid the free sale of anti-tuberculosis drugs.
- TB should be handled by the Ministry of Health, in accordance with health laws.

3.2 Cooperation among high-prevalence countries

This group was responsible for discussing the current situation of cooperation among the eight countries represented and the possibilities of utilizing more of the successful experiences of countries using DOTS in the Region. Representatives of the NTP of Bolivia, Ecuador, and Peru participated and Dr. José Ramón Cruz coordinated the discussion. Presented below are the most relevant points that the group recommends to the countries with the greatest TB burden.

Recommendations

- Utilize international courses in TB to strengthen the education of NTP personnel with respect to the management and application of the DOTS strategy. Such courses are held in Peru, Chile, Cuba and Nicaragua.
- Request advisory services for the NTP from countries with greater experience with TB information systems, laboratory networks, preparation of standards, and other specific subjects.
- Visit successful programs, such as those in Peru and Nicaragua.
- Promote and participate in operational studies of TB control. The group made proposals for multicenter studies and it was agreed that the focal point for these studies should be the PAHO Regional TB Program.
- Revitalize the existing agreements among countries with respect to healthy borders.
- Form discussion groups on specific TB-related subjects using e-mail.

3.3 Control of TB by including more collaborators from civil society (community groups, NGOs).

This group consisted of representatives from Haiti, Honduras, and the Dominican Republic. The coordinator was Dr. Marcos Espinal.

Recommendations

- The importance of the assumption of responsibility for control of TB, and thus for the prioritization of the NTP by national governments should be emphasized.
- Strategic partnerships with the public and private sectors, social security, NGOs, and the organized community for the organization, application, and consolidation of the DOTS strategy should be established.
- A model for surveillance, supervision, and evaluation that includes incentives should be established and any strategic model should begin with demonstration areas.
- An IEC component should be included in the plans of action of the NTP, incorporating personnel from community agencies, representatives from NGOs, the mass media, the religious sector, schools or professional associations, and the organized community.
- Greater participation of community leaders and managers of NGOs in all education, training, and supervisory activities of the NTP should be encouraged.

4. Plans of Action for 2001–2005

One of the principal objectives of the 2nd *Stop TB Americas* Meeting was the presentation and discussion of five-year plans of action to achieve complete expansion of DOTS and reach the WHO goals. Each country is responsible for the health of its population. However, tuberculosis cannot be controlled at the national, regional, or global levels, without the joint effort of NGOs, communities, and other partners that comprise the *Stop TB* campaign. In Brasilia, there was an excellent historic opportunity to achieve this goal and increase the financial resources for national programs as a part of the *Massive Effort against the Diseases of Poverty*. To this end, the countries should present a plan of action with clear, well-founded strategies which, united with the political will to fight TB, would create the conditions that lead to higher stages in control of the disease in our Region.

Thus, in working groups and a plenary session, the principal elements that constitute the national plan of action of the NTP were discussed, including priorities, opportunities, and principal challenges to be developed in five years. In this discussion a consensus was reached with respect to the principal *elements to consider in the plan of action* and the format that should be adopted:

- Executive Summary
- Introduction—to include the current situation and context, the opportunities, and the challenges
- Mission
- Objectives and goals
- Operational strategies
- Activities by phase: expected results, indicators, institution or level responsible, goals for coverage and impact, monitoring of performance
- Partners: cooperation agencies, institutions, NGOs, and collaborators (internal and external)
- Budget (broken down by year)—commitment by the country and partners, with costs not covered spelled out
- Annexes: logical framework, plan detailed by year.

The basic elements of the plan of action presented by each country are summarized below.

4.1 Bolivia

The Plan of Action of the NTP was prepared for the period 2000 to 2004. It was a consensus document developed by the Ministry of Health and Social Welfare, the Department for International Development of the United Kingdom (DFID), and the PAHO/WHO Representative Office in Bolivia. Every year there will be some adaptations as the detailed plan of activities is implemented.

Challenges

- Maintain political support for the NTP.
- Achieve the expansion of DOTS, incorporating the departments of La Paz and El Alto in this strategy.
- Maintain regular access to anti-tuberculosis drugs.
- Maintain external support for the NTP with DFID funds to guarantee expansion of DOTS and the plan for 2001 to 2005.

Priorities

- Sustain the commitment of the state to guarantee 100% of the budget destined for the supply of anti-tuberculosis drugs.
- Achieve efficiency of 85% in supervised treatment in 2004.
- Strengthen the health services and laboratory networks that carry out sputum smear microscopy.
- Prioritize the TB control activities in La Paz and El Alto.
- Incorporate the Honorary League and the Interagency Committee into the National Technical Committee.
- Promote the NTP at the national level through social advocacy and IEC.
- Guarantee that at the end of the plan of action 100% of the health services will be applying the DOTS strategy.

4.2 Brazil

Because Brazil is one of the 22 countries with high TB burden (the only one in the Americas), the plan of action of its NTP was presented and discussed at the meeting convened by PAHO/WHO in November 2000 (Cairo, Egypt). This plan contains the *priorities for the next five-year period*.

Challenges

- Guarantee political support for the NTP.
- Achieve expansion of DOTS through the integration of its actions into the primary health care program.
- Develop multisectoral actions to counteract the effects of HIV/AIDS/TB coinfection.

Priorities

- Strengthen the central level of NTP management.
- Install the National Notification System in nine states that do not have it.
- Increase and strengthen joint activity with the STI/HIV/AIDS program.
- Follow the plans for training and systematic supervision of the state coordination of the NTP.
- Expand the collaborating centers for training personnel (1,600 in the family health programs and 28,000 community agents) and also conduct operational studies.
- Increase diagnostic sputum smear exams from 600,000 in the year 2000 to 1 million in 2005.
- Integrate supervised treatment with TB activities in 233 prioritized municipalities with family health programs and community agents.
- Reduce annual default by 2% (from 12% in 2000 to 5% in 2005).
- Continue to provide incentive vouchers to municipalities for diagnosed and cured cases. Evaluate the application of this incentive.
- In all health centers utilize registration books for the NTP, the laboratory, and patients with respiratory symptoms.

4.3 Ecuador

Since 2000, the NTP has had resources provided by the Canadian International Development Agency (CIDA) under the administration of the Canadian Lung Association (CLA). The plan of action for 2001 to 2005 has been prepared and discussed; it includes initiation of the organization and application of the DOTS strategy in three demonstration provinces--Azuay, Guayas, and Pichincha--and subsequent expansion of the strategy.

Challenges

This NTP has had the greatest problems and delays in the implementation of DOTS, of all the countries of the Americas, including difficulties with drug supplies, problems with training and supervision of the program, problems with the laboratory network and the information system, and frequent turnover among the managerial staff responsible for the NTP.

Priorities

- Strengthen the central level of the program.
- Guarantee drugs and laboratory supplies.
- Organize and implement a single information system.
- Create an interagency committee to support the NTP of Ecuador.
- Review the national TB standards manual.
- Strengthen the bacilloscopy laboratory network.
- Develop a training program on the application and implementation of the DOTS strategy.
- Request advisory services from international consultants.
- Carry out the supervision, monitoring, and evaluation of the program.
- Implement interinstitutional coordination.
- Create a national interagency committee through national and international partnerships based on DOTS.

4.4 Haiti

There is a national plan for TB control. Among the opportunities mentioned were political support for control of TB, externally financed technical support, work of the NGOs linked to the program, experience in the management of the DOTS strategy and its local adaptation, application of innovative methods for facilitating observation of the treatment, and motivation of patients and their supervisors.

Challenges

Most notable are the HIV epidemic and high prevalences of HIV/AIDS/TB coinfection among risk groups and in the general population.

Priorities

- Extend the experience of the demonstration areas to the rest of the country.
- Integrate TB control activities into the health centers.
- Coordinate the actions with other communicable disease problems (STI/AIDS).
- Strengthen community participation.
- Continue the effort to collaborate with internal and external partners.
- Increase human resources.
- Create a national interagency commission to support the NTP.

4.5 Honduras

There is a national plan of action to control TB from 2001 to 2005. There is political support for the NTP as well as other institutions in the health sector. External support for the NTP from USAID has permitted expansion of DOTS through completion of plans for training and supervision. At this time a national survey to identify resistance to anti-tuberculosis drugs is being prepared.

Challenges

Maintaining political support for the NTP, improving access to anti-tuberculosis drugs, and addressing the high prevalence of HIV/TB are the three activities that will most effect the NTP.

Priorities

- Familiarize all the sectors, including the community, with the disease and the control program, and also the plan of attack (DOTS).
- Guarantee the timely supply of drugs.
- Maintain the DOTS strategy at the 100% level in the health regions with total coverage and increase it to 90% in the rest of the regions in the year 2001 to achieve total coverage in 2002.
- Continue implementation of the IEC plan, including training and updating with respect to tuberculosis, for personnel in institutions, in other sectors, and in the community.
- Strengthen the curriculum content in tuberculosis and microbiology at medical and nursing schools, for both professionals and auxiliaries.
- Improve the diagnostic capacity of the network: sputum smear microscopy culture, surveillance of drug sensitivity, microbacterial sero-typing, all under quality control.
- Conclude research on seroprevalence of HIV/TB and the study of drug sensitivity.

4.6 Mexico

There is a national plan of action for TB control. At the end of the year 2000 almost 300 municipalities had implemented the DOTS strategy and 50% of the country's population was covered. TB constitutes a public health priority and good coordination with the eight principal institutions in the health sector has been achieved. The laboratory network has been reorganized and there is now a single information system for epidemiological surveillance.

The country is receiving significant external support for the NTP (from USAID, CDC, and others), creating the conditions for the expansion of DOTS.

Challenges

- Maintain the political support which has managed to convert TB into a public health priority.
- Extend the DOTS strategy to the entire population of the country.
- Reduce the transmission of the infection and the disease.
- Focus strategically, in coordination with other programs, on the challenge that the HIV/AIDS epidemic represents for TB control.
- Achieve total integration of the institutions of the health sector into the activities for TB control in the country.

Priorities

- Implementing adequate strategies for intensifying efforts to locate and diagnose patients.
- Training health workers in all the institutions of the health sector.
- Promotion with sensitization of the population.
- Systematic supervision of TB control activities.
- Evaluation and systematic monitoring of the impact of control measures.
- Operations research that responds to the challenges that face the NTP.

4.7 Peru

The plan of action of the NTP was presented and discussed previously at the meeting of the 22 countries high TB burden countries in November 2000 (Cairo, Egypt). It contains the priorities for the next five-year period:

Priorities

- Political commitment and sustainability of the NTP to guarantee the successes achieved in recent years and continue the reduction of TB incidence as an expression of the reduction of the TB problem in the country.
- Continue actions to control TB (diagnosis, case-finding, and free supervised treatment in 100% of the cases).
- Strengthen the application of the DOTS-Plus strategy throughout the country.
- Introduce TB control activities in the areas with high risk of TB.
- Examine biosafety issues thoroughly.
- Strengthen epidemiological surveillance of the association of TB and HIV/AIDS.
- Continue coordination with other institutions in the health sector and work with Social Security (national hospitals).
- Form a national *Stop TB* committee that includes civil society and national and international agencies, with technical assistance from PAHO/WHO to strengthen social mobilization.
- Apply the computerized system TB 2000 (SYSTB), beginning in 2001.
- Form strategic partnerships with international agencies.
- Conduct operations research.
- Conduct epidemiological research (second study of prevalence and annual risk of infection, surveillance of resistance to anti-TB drugs).
- National and international support to promote the NTP to the new authorities.

4.8 Dominican Republic

There is a national plan for control of TB for 2001 to 2005. Among the opportunities mentioned was political support for control of TB ratified at this meeting by the Undersecretary of Health. The central team of the NTP is strengthened with the incorporation of a physician, an epidemiologist, a laboratory worker, and another nurse, externally financed technical support (USAID and the World Bank), the recent experience in the DOTS pilot areas, the motivation of the different participants, and the existence of local partners (Pneumological Society).

Challenges

Logistical limitations, high resistance to anti-TB drugs, high prevalence of HIV/TB in the population, and internal migration and immigration.

Priorities:

- Maintain the political will and support for the NTP.
- Achieve approval of projects with financing external to the NTP.
- Complete the establishment of the central laboratory and convert it into a national reference center for TB.
- Consolidate the work in the demonstration areas to convert them into national training areas.
- Establish greater coordination and joint work with the STI/HIV/AIDS program.
- Integrate the private sector into the NTP.
- Establish activities of bilateral cooperation between the Dominican Republic and Haiti for control of TB on the island.
- Create a national interagency commission to support the NTP.

5. Poster Session

As at other regional or subregional meetings, the participating countries were to bring posters containing all the epidemiological and operational information on their NTP.

This presentation was organized in three groups: Group 1 (Brazil and Mexico), Group 2 (Haiti, Honduras, and the Dominican Republic), and Group 3 (Bolivia, Ecuador, and Peru). In each group a facilitator and a rapporteur were available to organize the discussion of the most relevant points that each country had to prepare for its presentation:

a) Trend from 1990 to 2000

TB case trend (all forms of TB and new smear or AFB-positive cases).

b) Case-finding in the last five years

Identification of patients with respiratory symptoms, number of diagnostic sputum smear exams, and total number of new cases with positive smears.

c) BCG and TB meningitis

BCG coverage and cases of TB meningitis among children under 5 in the last two years.

d) HIV/AIDS/TB coinfection

Prevalence of HIV infection among the TB cases and of TB among HIV/AIDS cases in the last two years.

e) Analysis of the result of treatment, by cohort

Evaluation of the shortened treatment administered to the new cases with positive smears (1999 cohort), as well as SS(+) cases in retreatment.

f) Five principal limitations on the progress of the NTP and expansion of DOTS.

g) Summary of the key components of the plan of action for 2001 to 2005.

6. Plenary Session “The challenges for the improvement of the DOTS strategy in the Region”

In this section aspects of the NTP were included with the category of problems very common to all the countries, for the application of DOTS. The principal purpose of this session was to learn of the local initiatives for confronting these challenges and discuss them in plenary session for better utilization of the successful experiences. Some subjects, such as the registration and reporting system, training, and promotion were addressed in the respective discussion groups. Because of the importance of the subject of incentives and to learn about the experiences of each country, this subject was discussed by itself in a plenary session.

This session was coordinated by Ms. Diana Weil (World Bank/WHO) and Dr. Ramón Cruz (TB/PAHO):

In Brazil, it has been the policy for two years to encourage the health centers with a bonus of 100 *reales* for each patient in whom a cure is achieved. In addition, the payment per sputum smear exam has been increased. The impact of both incentives on the NTP has not yet been evaluated. It was recalled that the bonus project promoted by the Ministry of Health is a policy of incentives directed toward the health centers and not the patient. However, in Rio de Janeiro there is material support for the patient for transportation to and from the health centers where the DOT is provided.

In Haiti, the NTP offers incentives to patients and to companions (when they are hospitalized).

The **NTP of Honduras** pointed out the material incentives, such as vests, decorations, pins, and bags, that are delivered to workers and to patients. There are, in addition, moral incentives given to personnel, such as diplomas and certificates.

Ecuador does not provide incentives and held that the best incentive is humanization of care and systematic supervision of the health centers.

The **NTP of Peru** has developed an incentive policy over more than a decade. Firstly, there are incentives to the patient (personalized care, glass of milk, and work in workshops created for former patients). Secondly, the relatives of the community agents receive prioritized free health care when they require it. Finally, the health workers receive continuous training and material incentives.

The Dominican Republic reported that industry (e.g. milk industry) collaborates with funds for TB care. In many health centers lunch or breakfast is given to patients who receive supervised treatment. These funds are in the health center budget.

Mexico called attention to the risk of engendering paternalism (many incentives and few benefits from services). This should be studied carefully.

Other participants expressed the opinion that utilizing incentives could be seen as a part of the plan against the poverty. Finally, it was emphasized that what is most important is that the incentives not be politicized, and that there be coverage, and that the services be sustainable.

In conclusion, it was recommended that the NTP prepare a poster on the subject of incentives and send a summary to the next IUATLD conference, to be held in Paris.

Recommendation

It was possible to arrive at a consensus that there are countless types of material and moral incentives that, applied on an ongoing basis, can result in more patients completing their treatment and cure under DOTS.

7. Drug Resistance

The population of the Region of the Americas studied with regard to resistance to anti-TB drugs has had a coverage of over 90% and indications are that the burden of MDR-TB is of limited importance. The countries that have recently studied TB resistance (Canada, Chile, Colombia, Mexico, Nicaragua, Uruguay, and Venezuela) showed low prevalence of MDR-TB (lower than 3%), suggesting that in those countries MDR-TB is not a significant health problem. In fact, countries with a long history of good NTP performance, such as Cuba, Chile, and Uruguay, are relatively free from MDR-TB.

As was indicated in the first report on the WHO/IUATLD Global Project on Anti-Tuberculosis Drug Resistance Surveillance, the countries of the Region with high prevalence of MDR-TB were Argentina and the Dominican Republic. A new study is being carried out in Argentina, due to the significant bias with HIV patients included in the first study, but its results are still not available. In the Dominican Republic, activities to repeat the study conducted in 1994 have already been started. In addition, 3% of the new cases studied in Peru involved MDR-TB; this prevalence was not significantly different from that found in the survey conducted in 1995 and 1996. In addition, Peru reported a statistically significant reduction of resistance to any drug among previously treated TB cases.

Recommendations

1. Surveillance of the resistance to anti-TB drugs should continue and be allotted priority. It is very important that the countries make the effort to implement continuous surveillance. If that is not feasible, studies should be done every three to five years.
2. In order to prevent resistance to anti-TB drugs, countries should apply and expand TB control, with well-structured programs under DOTS. The administration of fixed drug combinations with guaranteed bioavailability should be regarded as a measure to prevent resistance.

8. Current HIV/TB Situation, Prospects, and Next Steps

TB is one of the most significant causes of morbidity and mortality among HIV-positive cases; at the same time, HIV is the most important factor in the continuation of the TB epidemic, not only in Africa, but throughout the world.

According to data from WHO, in 1998 there were some 2.5 million deaths due to AIDS. Tuberculosis is the second most important cause of death due to an infectious disease and its prevalence is increasing in many countries, to a great extent as a consequence of the HIV epidemic.

In the Region of the Americas, the patterns of the spread of HIV are very similar to those in the developed countries and they fall into three major categories:

- *Low intensity* (prevalence of HIV less than 1% among the groups at risk)
- *Concentrated* (prevalence of 1% to 5% among the groups at risk and less than 1% in the population)
- *Generalized* (prevalence greater than 5% among the groups with high risk and greater than 1% in pregnant women).

In Latin America and the Caribbean it is estimated that approximately 5% of the TB cases are attributable to HIV infection. However, only two countries, Cuba and Uruguay, (see the table below) carry out systematic epidemiological surveillance of HIV among TB patients and vice versa. Also, the NTP of Nicaragua concluded a national survey of HIV prevalence among TB cases (0.8%), while in Honduras the NTP is preparing implementation of a national study.

The Regional TB Program considers that the high TB burden countries with high prevalence of HIV/TB should update their knowledge of the behavior of both infections.

Prevalence of HIV/TB and TB/AIDS in selected countries of the Region

Country	Year	HIV/TB prevalence	TB/AIDS prevalence
Cuba	1999	1.4%	-
El Salvador	1999	2.7%	5.3%
Guatemala	1998	4.6%	-
Haiti *	1999	-	63.8%
Honduras	1997	3.8%	13.9%
Nicaragua	1998-1999	0.8%	-
Brazil**			
Rio de Janeiro	1995-1998	35.6%	-
Venezuela	1999	3.7%	49.6% (1998)
Uruguay	1999	1.3%	7.5%

Source: Annual reports of the NTP, 1999.

* Results are based on study from one health center.

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In light of the HIV/AIDS epidemic and the resurgence of TB, it should be recognized that in many countries the response of the health sector to HIV/AIDS and TB is still not well structured. It is known that there is little collaboration among the majority of the programs for control of TB and HIV/AIDS; the prevention of HIV/AIDS in the TB patient should be a priority for the control of TB, just as prevention of TB and care of TB patients should be a priority for the STI/AIDS programs.

A new strategy to promote the synergy of the TB and STI/AIDS programs, supporting the general health services in the first place, will become necessary within a short time. More resources are required to develop such a strategy, which would include:

- Prioritization of interventions applicable at the different levels of the health system
- Intensification of the detection of TB cases and achievement of efficiency in treatment
- Implementation of adequate measures to reduce the transmission of HIV
- Promotion of therapy with antiretroviral agents
- Implementation of treatment to prevent TB (chemoprophylaxis) in HIV-positive cases.

9. Conclusions and Principal Recommendations

As has been expressed in the analysis of the TB situation in the Region of the Americas and specifically, with regard to the eight countries that contribute more than 75% of the TB burden of the Region, progress has been achieved in the two years that have elapsed, but various limitations persist that should be addressed by the countries to reach the proposed goal of total coverage of DOTS and of WHO global targets in the next five years (2001 to 2005). The eight countries meeting in Brasilia should review and adapt the **plans of action** that make it possible to obtain the backing of the national health authorities and meet the proposed targets in that period. To achieve these objectives, the strategies and partnerships that make it possible to address the limitations that are restricting the expansion of DOTS should be established in every country, as follows:

Advocacy

1. Sensitize the principal governmental authorities in each country in order to ensure the political will and confront TB as a priority problem for public attention.
2. Increase external fund-raising by demonstrating local successes in the application of DOTS.

Managerial

3. Promote the organization and coverage of the health services and the laboratory network and, with adequate strategies, address the problems that are generated in the application of health sector reform.
4. Strengthen the quantity and capacity of human resources for the expansion of DOTS (central, regional, and local teams are in many cases minimal and insufficiently trained for the management of the program).
5. Guarantee the adequate, regular supply of anti-tuberculosis drugs to treat all of the infectious new cases and retreatment cases. The purchase of second-line drugs should occur under the guidelines established by the "Green Light Committee."
6. Identify and give prioritized attention to population groups with high TB morbidity and mortality (indigenous population, prisoners, and groups in extreme poverty that have difficulty accessing medical care).
7. Reformulate the plans of action to cover five years on the basis of the guidelines discussed and established at the meeting. Send them to the Regional TB Program in one month (May 2001).

Research

8. Allot greater importance and support to operations research that responds to the principal problems that the NTP faces.
9. Prepare a report on the experiences in the application of incentives by the TB programs of countries of the Region.

Coordination and Collaboration

10. Improve the coordination and integration of the different institutions of the health sector, such as private medicine, social security, the army, and prisons.
11. Coordinate the TB and STI/AIDS programs and sensitize their managers to the importance of cooperation and joint effort by the two programs for the control of both diseases.
12. Forge local partnerships, create an interagency commission with institutions, agencies, nongovernmental organizations, donors, and others that support the NTP, and facilitate acquisition of the resources for control activities in the implementation and expansion of DOTS.
13. Increase collaboration among countries, taking advantage of the experiences of countries that successfully apply the DOTS strategy.
14. Hold the 3rd *Stop TB* Meeting of prioritized countries in April 2002.

Annexes

I. Meeting of the DOTS-Plus Working Group, Lima, Peru

Dr. Marcos Espinal, Coordinator of DOTS-Plus for WHO, reported that in January of the present year the meeting of the Working Group on that subject was held in Peru. DOTS-Plus is an initiative, in the pilot phase, for the management of MDR-TB with second-line drugs, within the DOTS strategy in countries with low and medium resources.

The agenda consisted of the following:

1. Review of the pilot projects and their progress
2. Review of advances in access to second-line drugs
3. Preparation of a research plan.

Discussion 1, on the progress of DOTS-Plus:

The pilot projects in Peru, the Philippines, South Africa, Morocco, Estonia, Latvia, and Russia, under program conditions, still present big challenges in the use of standardized or individualized schemes with second-line drugs.

Discussion 2, on access to drugs:

Most notable was the access to second-line drugs through the Green Light Committee, which has shown its effectiveness in avoiding the misuse of such drugs. The committee, formed by WHO, Medecins Sans Frontiers, KNCV, CDC, Harvard University, and the NTP of Peru, should continue to work and advise the countries that meet conditions for the use of these drugs.

Discussion 3, research related to the subject:

More than six points of interest were proposed: communicability of the resistant strains *versus* the susceptible strains, cost effectiveness of the different strategies (standardized and individualized treatment), the point at which treatment with second-line drugs should be initiated, the effect of “amplification,” diagnostic tools, and others.

Conclusions

1. The application of the DOTS strategy should precede DOTS-Plus.
2. Access to the second-line drugs should continue through the Green Light Committee.
3. Work should continue on the reduction of the price of drugs.
4. In the DOTS-Plus initiative, there are still many unanswered questions.

Summary of the position of WHO

- The DOTS strategy is a priority to prevent the creation of MDR-TB.
- Execution of pilot projects of DOTS-Plus recommended to determine feasibility.
- Based on the results, WHO and the partners in the alliance will formulate recommendations for the management of MDR-TB.
- DOTS-Plus will be incorporated, ultimately, within the movement for expansion of DOTS.

II. Monitoring the Agreements from Cairo, Egypt, and Bellagio, Italy (Report of Dr. Marcos Espinal, TBS/STB/WHO)

A fruitful meeting of the Provisional *Stop TB* Coordinating Board was held in Bellagio, Italy, from 20 to 22 February. The meeting fulfilled the four stated objectives:

- 1) Examine the progress and formulate priorities for the action of the world alliance movement
- 2) Support and operationalize the integration of the “*Stop TB*” strategy and the mechanisms of governance
- 3) Approve the plan for the launching and operationalization of the Global Drug Facility and the Global Investment Plan
- 4) Examine and approve the work plan and the budget of the Secretariat of the “*Stop TB*” Alliance for the year 2001.

In the declaration, international partners were called upon to increase collaboration in TB control and strengthen development plans, incorporating the TB control and health in general. Universal access to anti-TB drugs is a relevant point in expansion of the strategy, as is acceleration of basic and operations research. In addition, it is necessary to establish a world fund to mobilize and invest new resources. As a response from WHO and the partners at the Amsterdam Ministerial Conference, there were consultations among the partners and it was clear that they were prepared to contribute assistance to the countries, as a part of a coordinated strategic plan, starting with the countries with high TB burden.

The first meeting of the Working Group for DOTS Expansion was held in Cairo in November 2000. Subsequently, at the beginning of 2001, there was a meeting of the donors and, in addition, the Global Drug Facility was established as an integral component of the Plan for Global Expansion of the DOTS Strategy. In the Americas regional plans for the medium term are being developed, and the creation of interagency coordinating committees is being promoted, together with *Stop TB*, to support those plans.

III. Global Drug Facility

Ms. Diana Weil, explained that this is a mechanism to expand availability and fast access to anti-TB drugs, which guarantees quality and permits the expansion of the DOTS strategy.

The goals of the fund are as follows: 1) to ensure access to the specific drugs without interruption, 2) to catalyze the expansion of DOTS in order to achieve the WHO global TB control targets in the year 2005, 3) to promote political and community support for public financing of anti-TB drugs, and 4) to create the bases for sustainable control of TB and, ultimately, to eliminate TB as a public health problem.

The activities of the GDF are concentrated on the mobilization of resources for the procurement and transfer of the drugs to the countries that are in the process of expanding the DOTS strategy. It considers the requests of the countries or agencies that meet the requirements of planning and implementation of the DOTS in order to develop agreements between the GDF/WHO and the governments; it is also considering the purchase of drugs through competitive bidding, taking into account the prequalified laboratories, and direct distribution to countries. Furthermore, it offers drug procurement services to the governments and their allies **that are financing their own needs.**

The requirements and conditions established by the GDF include consideration of the presentation of the strategic plan for the application and expansion of DOTS, with epidemiological, administrative, and financial indicators, and information on the drug supply and distribution system.

VI. Family Health Program in Brazil

(Presentation by Dr. Heloísa Machado, Director of the Basic Health Care Dept., Ministry of Health of Brazil)

Taking into account that Brazil is the country with the greatest TB burden in the Region and the only representative of our Region among the 22 countries in this category, Dr. Machado was requested to make a presentation on the family health program as a national health policy and strategies for the expansion of DOTS in Brazil.

Municipalization should improve the management of the programs; 90% of the municipalities have already been decentralized.

Several actors participate in the management:

- a) The state Secretaries of Health
- b) The municipal Secretaries of Health
- c) The state Tripartite Commission
- d) Primary Care (Basic Care)

The Family Health Program works with work teams, each consisting of a physician, a nurse, a nursing auxiliary, and several community health workers who work closely with the community. In the country there are currently 130,000 health teams covering a population of approximately 65 to 70 million inhabitants. In the year 2004, 70% of the population should be covered.

This is not a pilot project, but current health policy. The progressive integration of the NTP of Brazil into the family health plan constitutes the cornerstone of improving the control of TB in this country, with the principal activities carried out at the local health level (DOTS).

V. *Stop TB Partners, Americas Region*

One of the principal objectives of this 2nd *Stop TB Americas* Meeting was the active participation of the agencies and institutions that lend support to the control of TB in the Region--the partners. With this participation not only were the TB situation in each country and the challenges to the expansion of DOTS known but the presence of the representatives made it possible to forge alliances with the countries with the greatest TB burden. A Regional Interagency Committee of partners to support control of TB may be created in the future.

Each invited partner presented an up-to-date panorama of the support work that it carried out in the Region to improve TB control programs and the possibilities of taking on new commitments or extending current ones.

A summary of each presentation follows:

5.1 *United States Agency for International Development (USAID)*

The USAID presentation was given by Ms. Susan Bacheller, Adviser in Population, Health, and Nutrition in the agency in Washington, D.C. The agency has a budget of US\$ 7 000 million dollars allocated by the United States government with the objective of collaborating in six principal categories: economy, health, human development, environment, democracy, and education. In order to optimize the support for the countries, there are 16 missions in Latin America and the Caribbean.

From 1998 to 2001, the budget allocated to infectious diseases was increased from 50 million to more than 120 million dollars and that for TB increased from 10 to 60 million. USAID seeks to contribute to the global effort against TB in order to reduce the morbidity and mortality of that disease, strengthen the control capacity of the NTP, and expand DOTS. USAID also supports the development of new tools for control of TB and collaborates with the new allies as part of the Coalition for Technical Assistance against TB.

The USAID criteria for collaboration with the countries is based on: the burden and incidence of TB, the prevalence of HIV/AIDS, MDR-TB, the migratory impact in the United States, Congressional priorities, and interest on the part of the country and the USAID mission.

At this time, USAID provides collaboration to the NTP of Mexico, Brazil, Haiti, El Salvador, Honduras, Bolivia, Peru, and the Dominican Republic.

In the case of Mexico, the strategic objective is to develop institutional capacity which is sustainable and effective in order to diagnose, control, and monitor tuberculosis in the thirteen priority states (Baja California, Sonora, Chihuahua, Coahuila, Nuevo León, Tamaulipas, Chiapas, Jalisco, Veracruz, Michoacán, Guerrero, Oaxaca, and San Luis Potosí).

5.2 *Canadian Lung Association*

The Canadian Lung Association (CLA) was represented by Ms. Lucero Hernández and Dr. Brian Graham. In the year 2000, the TB control and prevention project of the Canadian International Development Agency (CIDA) with the Ministry of Health of Ecuador was approved. It is designed to strengthen the management of the NTP through the implementation of the DOTS strategy. This project is administered by the CLA, which provides the required technical assistance. The categories of the project are: training, supervision, evaluation, and laboratory equipment. The government has made a political commitment to control TB and the future sustainability of the project is a goal. The organization of three demonstration areas was begun in the provinces of Guayas, Pichincha, and Azuay. In 2002, activities will be expanded, and in 2003 further expansion will depend on the results that are obtained in the field.

5.3 *German Leprosy Relief Association*

The coordinator of the German Leprosy Relief Association (DAHF) in Brazil is Mr. Manfred Göbel, who reported that the organization was formed in 1957 and its funds are contributed by the German people. It collaborates with the leprosy and TB programs in 49 countries, developing 327 projects, with a total contribution of 13 million dollars. In Latin America it supports seven countries with 32 projects, which represents 7% of the total budget.

This NGO seeks to improve the integrated programs of leprosy and TB in accordance with national standards and in association with the governmental institutions.

The projects in the Region are located in Argentina, Bolivia, Brazil, and Ecuador.

5.4 *World Bank*

As a World Bank representative was unable to participate, Ms. Diana Weil, WHO-seconded Public Health Specialist, reported on the commitments of the World Bank to control TB in the countries of Latin America. She pointed out that Bank financing has been given mainly for strengthening and reforming health systems and for specific public health interventions. The Bank has also promoted dialogue between governmental authorities and principal partners, situational analysis of the health sector, and financial support for the *Stop TB* partnership.

Currently, in Argentina a loan is being executed through the VIGIA program, aimed at epidemiological surveillance, strengthening the laboratories, training, and supervision; it includes a component for TB. In Brazil, there is a similar situation with the VIGISU project aimed at control of priority diseases in the Amazonas, epidemiological surveillance, and the health of the indigenous population.

In Ecuador, a loan is being arranged for the procurement of anti-TB drugs. In Haiti the Health I project is coming to a conclusion and there are new negotiations to continue with the Health II project, which includes all aspects of TB control and the expansion of DOTS demonstration areas.

Other activities of the World Bank in the health sector can be observed in Mexico in “Basic Health”, in the English-speaking Caribbean in the improvement of the HIV/AIDS situation, in the Dominican Republic where there is another HIV/AIDS project with a TB subcomponent, and in Venezuela in urban health projects.

5.5 Centers for Disease Control and Prevention in Atlanta

The activities of the Centers for Disease Control and Prevention (CDC) in Latin America were described by Dr. Kayla Laserson, epidemiological surveillance officer.

The CDC collaborates with projects in different components of tuberculosis control programs: in Brazil (nosocomial transmission of TB), in El Salvador (technical assistance in the area of communication and education), in Peru (Gates Foundation fellowship to study and manage MDR-TB), and in Haiti (with the initiation of LIFE this year), as well as in Mexico.

The most significant binational project is being executed by the United States and Mexico, prioritizing the border states of both countries. This includes: technical assistance in the reporting and recording of TB, implementation of a binational card that facilitates the referral of TB patients that travel between the United States and Mexico, and laboratory staff training projects in both countries. The CDC, in collaboration with other partners, has planned worldwide dissemination of materials (videotapes, slides, and audiovisual and written materials) for education and training in sputum smear microscopy. Furthermore, the CDC is involved in the working group on training and education of the IUATLD.

5.6 American Red Cross and Mexican Red Cross

Ms. Sandra Brady and Mr. Joselito Garcia gave a presentation on the activities of the American Red Cross. Historically, the American Red Cross has supported world efforts to combat TB and has collaborated with the National Tuberculosis Association of the United States. In that country it promotes social, educational, and preventive programs in 16 different languages, including in the border states of Arizona, California, New Mexico, and Texas, while a branch of the Mexican Red Cross works in seven Mexican states, namely Baja California, Coahuila, Chihuahua, Mexico, Nuevo León, Sonora, and Tamaulipas.

In addition, the Mexican Red Cross operates prehospital services, health clinics, and laboratories. It provides education to the community on HIV/AIDS/TB and promotes voluntary programs and work in the schools of nursing. It has also developed programs

that provide economic support for the family of the patient and incentives to the patients and promote physical and mental health.

5.7 *Damian Foundation*

The projects of the Damian Foundation (DF) in Latin America were described by Dr. Martine Tromme-Toussaint (Central America) and Patrick Denis (Brazil). The representatives of the DF emphasized the nonprofit role and collaboration with the governments with the idea of promoting long-term projects. Its mission consists of providing specialized medical care in leprosy, TB, and leishmaniasis and sensitizing the population of Belgium so that it collaborates with other countries.

The principal interventions of the foundation include:

- 1) Increasing the operating capacity of health centers
- 2) Supporting the laboratory network at its different levels
- 3) Training health workers and promoters
- 4) Specialized technical support
- 5) Promotion and health education
- 6) Supervision of territorial actions.

In ten years, the DF has collected twice the resources allocated to the collaboration. Most (88%) of the financing provided by the Foundation is directed toward the following: Asian countries (44%), Africa (39%), and four countries in Latin America (5%). Funds are destined for TB projects in Guatemala (DOTS), Panama (DOTS), Nicaragua (leishmaniasis), and Brazil (TB and Hansen's disease in Goias and the Federal District). It is anticipated that in 2001 the DF will have regional representation, located in Panama.

5.8 *International Union against Tuberculosis and Lung Disease*

A report of the work of the International Union against Tuberculosis and Lung Disease (IUATLD) was presented by Dr. Nils Billo, Executive Director.

The IUATLD participates actively in all instances of the *Stop TB* initiative and in the working groups, as a constituent member. In the area of assistance and education, during 1998 and 2000 the IUATLD provided intensive technical assistance to nine countries of Latin America. It collaborated in the organization of varied courses: *the International Course in Epidemiology and Control of TB* in Nicaragua, which continues to serve as a basis for the training of health workers in the Americas, and courses for medical specialists and laboratory technicians which serve to improve the quality of the control activity. *The Epidemiological Basis for Control of TB* was published in Spanish in 1999 and there are plans to publish the journal of IUATLD, *International Journal of Tuberculosis and Lung Diseases*, in Spanish.

With respect to research, the IUATLD collaborates in the following:

- Course on research methods
- Health policy analysis

- Operational studies
- Network for clinical trials
- Publications.

Table 1: Reported new TB cases in 1998 and 1999 and percentage change,
Region of the Americas

Country	No. of cases		Dif. (%)	AFB(+)		Dif. (%)
	1998	1999		1998	1999	
Argentina	12,276	11,871	-3.2	5,186	5,762	+11.1
Bolivia	10,132	9,272	-8.4	6,750	6,506	-3.6
Brazil	84,194	78,628	-6.6	38,809	41,434	+6.7
Chile	3,668	3,429	-6.5	1,576	1,679	+6.5
Colombia	9,155	10,999	+20	6,969	8,329	+19.5
Costa Rica	694	745	+7.3	562	567	+0.9
Cuba	1,304	1,111	-14.8	744	720	-3.2
Ecuador	9,184	7,027	-23.4	6,455	5,149	-20.2
El Salvador	1,700	1,623	-4.5	1,071	1,023	-4.4
USA, USA	18,361	17,531	-4.5	6,630	6,252	-5.7
Guatemala	3,059	2,820	-7.8	2,255	2,264	+3.9
Haiti	9,770	9,125	-6.6	6,442	6,750	+4.7
Honduras	4,916	4,264	-13.2	2,311	2,367	+2.4
Jamaica	121	115	-4.9	80	92	+15
Mexico	21,514	19,802	-7.9	12,622	13,452	+6.5
Nicaragua	2,604	2,558	-1.7	1,648	1,564	-5.0
Panama	1,479	1,365	-7.7	1,393	1,178	-15.4
Paraguay	1,858	2,115	+13.8	850	963	+13.2
Peru	43,723	41,730	-4.5	27,707	24,511	-11.5
Dom. Rep.	4,263	5,320	+24.7	2,164	2,936	+35.6
Suriname	74	93	+25.6	42	37	-11.9
Trin. and Tobago	192	152	-20.8	98	86	-8.1
Uruguay	668	627	-6.1	374	384	+2.6
Venezuela	6,273	5,760	-8.1	3,450	3,670	+6.3
TOTAL	251,775	238,082	-5.4	136,436	137,675	+9.0

Table 2: Mobilization of resources for TB programs, Americas, 2001

Country	With financing	Without financing from PAHO or other external source
Argentina	VIGIA and World Bank, \$5 million for 3 years	
Belize		X
Bolivia	DFID, \$2.5 million for 3 years	
Brazil	Possible \$3 million from USAID Damian Foundation in Goias state	
Chile		X
Colombia	PAHO/CIDA project	Possible support from Canada in 2001
Costa Rica		X
Cuba		X
Ecuador	\$2 million for 2 years from CIDA	
El Salvador	\$1.9 million for 3 years from USAID	
Guatemala	\$1million from DFID for 3 years (2000-2003) \$60,000 annually from the Damian Foundation	
Guyana		Possible support from Canada in 2001
Haiti	World Bank loan, \$0.5 million, and possible support from USAID, \$1million in 2001	
Honduras	\$650,000 from USAID for 2 years	
Jamaica		X
Mexico	\$16 million from USAID	
Nicaragua	\$1 million from DFID for 3 years (2000-2003)	
Panama	Euro\$ 393,000 for advisory services and indigenous communities (Damian Foundation)	
Paraguay	PAHO project with CIDA	Possible support from Canada in 2001
Peru	\$3 million from CIDA in 3 years	
Puerto Rico		X
Dominican Rep.	Possible support from USAID, \$1.2 million (3 years)	
Suriname		X
Trinidad and Tobago	Collaboration from Canada through CAREC	
Uruguay		X
Venezuela	Loan from the World Bank executed	X

Countries without external funds to apply the strategy and meet the PAHO/WHO goals

Country	No. of TB cases	Rate per 100,000 pop.	Situation	Strategy
Belize	48	21	Low prevalence	With own funds
Chile	3,429	23	" "	" " "
Costa Rica	745	21	" "	" " "
Cuba	1,111	10	" "	" " "
Jamaica	115	4.5	" "	" " "
Puerto Rico	200	5.2	" "	" " "
Suriname	93	22	" "	" " "
Uruguay	627	20	" "	" " "
Venezuela	5,760	24	" "	" " "

Goal to 2005: Detect 70% of the sources of infection and cure at the very least 85% of the new sources of infection.

Table 3: Treatment results of new AFB(+) cases Region of the Americas

COUNTRY	REG	NOT	%	CURE	%	TT	%	TT.	%	FAT.	%	FAI	%	DEF.	%	TRN	%
BOLIVIA	6750	1407	21%	3765	56%	406	6%	4171	62%	239	4%	37	1%	670	10%	226	3%
BRAZIL	82	0	0%	64	78%	11	13%	75	91%	2	2%	0	0%	0	0%	5	6%
CHILE	1565	0	0%	0	0%	1294	83%	1294	83%	112	7%	10	1%	87	6%	62	4%
COLOMBIA	562	0	0%	363	65%	55	10%	418	74%	17	3%	5	1%	76	14%	46	8%
CUBA	739	0	0%	695	94%	2	0%	697	94%	29	4%	4	1%	5	1%	4	1%
EL SALVADOR	940	13	1%	692	74%	34	4%	726	77%	58	6%	5	1%	83	9%	55	6%
JAMAICA	80	0	0%	40	50%	31	39%	71	89%	4	5%	0	0%	5	6%	0	0%
GUATEMALA	2300	0	0%	1580	69%	242	11%	1822	79%	116	5%	27	1%	239	10%	96	4%
HAITI	1476	0	0%	893	61%	274	19%	1167	79%	133	9%	10	1%	112	8%	54	4%
HONDURAS	56	0	0%	52	93%	0	0%	52	93%	2	4%	0	0%	2	4%	0	0%
MEXICO	4941	0	0%	3518	71%	339	7%	3857	78%	273	6%	91	2%	494	10%	226	5%
NICARAGUA	1653	0	0%	1145	69%	214	13%	1359	82%	66	4%	29	2%	144	9%	55	3%
PANAMA	77	0	0%	7	9%	32	42%	39	51%	5	6%	0	0%	28	36%	5	6%
PERU	2613	0	0%	2417	92%	0	0%	2417	92%	577	2%	365	1%	834	3%	186	1%
PUERTO RICO	107	18	17%	0	0%	73	68%	73	68%	14	13%	0	0%	2	2%	0	0%
ST. VINCENT & THE GRENADINES	4	2	50%	0	0%	1	25%	1	25%	1	25%	0	0%	0	0%	0	0%
ST. LUCIA	17	0	0%	14	82%	0	0%	14	82%	2	12%	1	6%	0	0%	0	0%
TRINIDAD AND TOBAGO	82	0	0%	42	51%	11	13%	53	65%	15	18%	2	2%	12	15%	0	0%
TURKS AND CAICOS	7	0	0%	0	0%	5	71%	5	71%	0	0%	1	14%	1	14%	0	0%
URUGUAY	379	0	0%	301	79%	17	4%	318	84%	42	11%	10	3%	8	2%	1	0%
USA	6630	928	14%	0	0%	4801	72%	4801	72%	658	10%	0	0%	19	0%	224	3%
VENEZUELA	3305	0	0%	2678	81%	0	0%	2678	81%	152	5%	14	0%	323	10%	138	4%
TOTAL	5788	2368	4%	4002	69%	7842	14%	4786	83%	2517	4%	611	1%	3144	5%	1383	2%

COUNTRY (NO)	REG	NOT	%	CURE	%	TT.	%	TT.	%	FAT	%	FAI	%	DEF.	%	TRNS	%
ANTIGUA & BARBUDA	4	0	0%	2	50%	0	0%	2	50%	1	25%	0	0%	0	0%	1	25%
ARGENTINA	5234	1304	25%	1323	25%	1574	30%	2897	55%	243	5%	18	0%	497	9%	275	5%
BAHAMAS	32	0	0%	0	0%	18	56%	18	56%	13	41%	0	0%	0	0%	1	3%
BRAZIL	2999	1428	48%	3009	10%	8897	30%	1190	40%	719	2%	88	0%	1893	6%	1106	4%
CAYMAN ISLANDS	2	0	0%	2	100%	0	0%	2	100%	0	0%	0	0%	0	0%	0	0%
COLOMBIA	6407	6407	100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
COSTA RICA	562	562	100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
EL SALVADOR	87	87	100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
GRENADA	2	0	0%	0	0%	1	50%	1	50%	1	50%	0	0%	0	0%	0	0%
HAITI	4966	0	0%	2382	48%	760	15%	3142	63%	261	5%	36	1%	1150	23%	377	8%
HONDURAS	2256	462	20%	1202	53%	217	10%	1419	63%	122	5%	7	0%	196	9%	50	2%
MEXICO	6532	0	0%	4309	66%	479	7%	4788	73%	274	4%	69	1%	1060	16%	341	5%
MONSERRATE	2	0	0%	0	0%	1	50%	1	50%	1	50%	0	0%	0	0%	0	0%
PANAMA	592	0	0%	4	1%	302	51%	306	52%	57	10%	14	2%	158	27%	57	10%
PARAGUAY	850	148	17%	229	27%	246	29%	475	56%	27	3%	0	0%	189	22%	11	1%
DOM. REPUBLIC	2194	887	40%	658	30%	233	11%	891	41%	64	3%	40	2%	276	13%	36	2%
SURINAM	46	0	0%	10	22%	19	41%	29	63%	2	4%	0	0%	12	26%	3	7%
TOTAL NO-	5976	2414	40%	1313	22%	1274	21%	2587	43%	1785	3%	272	0%	5431	9%	2258	4%

REG.
NOT EVAL: Not
Evaluated

FAT:
FAIL: Fail
Rate

Table 4: Principal indicators of detection and coverage of the DOTS strategy
in prioritized countries, Region of the Americas, 1999

Country	Pop., 1998	Total no. of TB cases, 1999	No. of AFB(+) cases, estimated by WHO	No. of AFB(+) cases reported, 1999	AFB(+) (estimated %)	DOTS coverage (%)	Population with DOTS coverage
Bolivia	7,957,253	9,272	9,057	6,506	75%	50%	3,978,626
Brazil	165,850,620	78,628	55,160	41,434	70%	10%	16,585,062
Ecuador	12,174,641	7,027	9,006	5,149	72%	10%	1,217,641
Haiti	7,952,408	9,125	12,147	6,750	53%	10%	795,240
Honduras	6,147,498	4,264	2,617	2,367	88%	33%	2,049,166
Mexico	95,830,901	19,802	17,089	13,452	73%	50%	47,915,450
Peru	24,796,829	41,730	29,442	24,511	94%	100%	24,976,829
Dom. Rep.	8,231,879	5,320	4,127	2,936	53%	10%	823,187
Total	328,942,029	175,168	138,645	103,105	74%	33.75	98,341,201

ACRONYMS AND ABBREVIATIONS

AFB	Acid-fast bacilli
AIDS	Acquired immunodeficiency syndrome
CDC	Centers for Disease Control and Prevention of the USA
CIDA	Canadian International Development Agency
CLA	Canadian Lung Association
DAHW	German Leprosy Relief Association
DOTS	Directly observed treatment, short-course
DOTS-Plus	Strategy to treat MDR-TB with second-line drugs
DFID	Department for International Development of the United Kingdom
GDF	Global Drug Facility
IEC	Information, education, and communication
STI	Sexually transmitted infections (previously STD)
MDR-TB	Multidrug-resistant tuberculosis
PAHO	Pan American Health Organization
WHO	World Health Organization
NGO	Nongovernmental organization
NTP	National tuberculosis control program
SS+	Smear Positive
<i>Stop TB</i>	Global partnership to fight TB
TB	Tuberculosis
IUATLD	International Union against Tuberculosis and Lung Disease
USAID	United States Agency for International Development
HIV	Human immunodeficiency virus

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